

CLAIMS

We claim:

1 1. A method of detecting defects in a recordable optical storage medium,
2 comprising the steps of:

3 accessing a segment of multimedia data that has been recorded onto a
4 portion of the recordable storage medium;

5 selectively examining the segment to determine whether the portion contains
6 a defect; and

7 taking corrective measures if a defect is detected, wherein the corrective
8 measures are one or more of the corrective measures selected from the group
9 comprising:

10 generating a defect message;

11 storing the address of the portion of the recordable storage medium in
12 a table;

13 writing the segment of multimedia data onto a new portion of the
14 recordable storage medium; or

15 modifying said selectively examining step.

1 2. The method according to claim 1, wherein said accessing step comprises the
2 step of recording the segment of multimedia data onto the portion of the recordable
3 storage medium.

1 3. The method according to claim 1, wherein said selectively examining step
2 comprises the steps of:

3 selectively reading the segment; and

4 selectively processing at least one error correction indicator in the segment to
5 locate at least one error in the segment.

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1 4. The method according to claim 3, wherein the errors are correctable
2 and the number of errors has reached a predetermined threshold.

1 5. The method according to claim 3, wherein the errors are uncorrectable.

1 6. The method according to claim 5, wherein said selectively reading and
2 said selectively processing steps are repeated until the errors are corrected or
3 repeated for a predetermined number of times, whichever is less.

1 7. The method according to claim 6, wherein the recordable optical
2 storage medium is a disc that spins during said selectively reading step and the
3 selectively reading step further comprises the step of decreasing the speed of the
4 disc prior to each said selectively reading step.

1 8. The method according to claim 7, wherein said selectively reading step
2 further comprises the step of maintaining the speed of the disc substantially constant
3 during each said selectively reading step.

1 9. The method according to claim 5, wherein said selectively reading step
2 further comprises the step of skipping over at least a portion of the segment.

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1 10. The method according to claim 1, further comprising the step of
2 providing a front end section of a storage medium device, wherein said selectively
3 examining step is performed exclusively within said front end section.

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11. A method of detecting defects in a recordable storage medium, comprising the steps of:

writing a segment of test data onto at least a portion of the recordable storage medium:

selectively examining the segment of test data to determine whether the recordable storage medium contains a defect; and

7 taking corrective measures if a defect is detected, wherein the corrective
8 measures are one or more of the corrective measures selected from the group
9 comprising:

10 generating a defect message;

11 storing the address of the portion of the recordable storage medium in
12 a table; or

13 writing the segment of test data onto a new portion of the recordable
14 storage medium.

1 12. A system for detecting defects in a recordable optical storage medium,
2 comprising:

3 a pickup assembly for accessing a segment of multimedia data that has been
4 recorded onto a portion of the recordable storage medium; and

5 a controller for:

6 selectively examining the segment to determine whether the portion
7 contains a defect; and

8 taking corrective measures if a defect is detected, wherein the
9 corrective measures are one or more of the corrective measures selected from the
10 group comprising:

11 generating a defect message;

12 storing the address of the portion of the recordable storage medium in
13 a table;

14 writing the segment of multimedia data onto a new portion of the
15 recordable storage medium; or

16 modifying said selectively examining step.

1 13. The system according to claim 12, wherein the pickup assembly
2 records the segment of multimedia data onto the portion of the recordable storage
3 medium.

1 14. The system according to claim 12, wherein said controller comprises:
2 a front end processor; and

3 a back end processor.

1 15. The system according to claim 14, wherein the front end processor is
2 programmed to:

3 selectively reading the segment; and

4 selectively processing at least one error correction indicator in the segment to
5 locate at least one error in the segment.

1 16. The system according to claim 15, wherein the errors are correctable
2 and the number of errors has reached a predetermined threshold.

1 17. The system according to claim 15, wherein the errors are
2 uncorrectable.

1 18. The system according to claim 17, wherein the front end processor is
2 further programmed to repeat the selectively reading and selectively processing
3 steps until the errors are corrected or repeated for a predetermined number of times,
4 whichever is less.

1 19. The system according to claim 15, wherein the recordable optical
2 storage medium is a disc that spins as the segment is selectively read and the back
3 end processor is programmed to decrease the speed of the disc prior to the segment
4 being selectively read.

1 20. The system according to claim 19, wherein the back end processor is
2 further programmed to maintain the speed of the disc substantially constant as the
3 segment is selectively read.

1 21. The system according to claim 17, wherein the front end processor is
2 further programmed to skip over at least a portion of the segment.

22. The system for detecting defects in a recordable storage medium comprising:

a pickup assembly for writing a segment of test data onto at least a portion of the recordable storage medium;

a front end processor programmed to selectively examine the segment of test data to determine whether the recordable storage medium contains a defect; and

a back end processor programmed to take corrective measures if a defect is detected, wherein the corrective measures are one or more of the corrective measures selected from the group comprising:

generating a defect message;

storing the address of the portion of the recordable storage medium in a table; or

instructing the pickup assembly to write the segment of multimedia data onto a new portion of the recordable storage medium.